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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/666,264	09/19/2003	Ian Anthony Jones	Q90171	7763
23373	7590	09/12/2007	EXAMINER	
SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037			ELVE, MARIA ALEXANDRA	
			ART UNIT	PAPER NUMBER
			1725	
			MAIL DATE	DELIVERY MODE
			09/12/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/666,264

Applicant(s)

JONES ET AL.

Examiner

M. Alexandra Elve

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 June 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8,12,13,15,17-25,27-29,34 and 35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8,12,13,15,17-25,27-29,34 and 35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☒ Certified copies of the priority documents have been received in Application No. 09/806,613.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

Claim 35 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is not clear if "dissolved" occurs in the solvent prior to radiation or if "dissolved" is an outcome of the radiation process.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-8, 12-13, 15, 17-21, 27 & 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Corrsin (USPN 3,477,194) in view of Kaieda et al. (USPN 5,712,332).

Corrsin discloses the sealing of thermoplastic thin materials using infrared radiation and a carbon material in between the materials. The carbon substance is printed onto a board, which is faced or overlaid with a thermoplastic material. The coating and film are welded throughout the area overlying the infrared absorbing material. Absorbers may also be in form of inks. Lamps or carbon dioxide lasers can be

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used. An absorber can be a visually transparent radiation absorber that is selective to radiation in a certain range of wavelengths. Radiation is chosen in a certain range of wavelengths, in this case infrared. Specifically two plastic films where one film is a pigmented film and the other film are visually transparent. The layer of material, which is capable of absorbing radiation, is interposed between the two films in the areas to be sealed and the package is irradiated. Hence the films are sealed together by a substantially visually transparent radiation absorber, which selectively absorbs radiation, thus causing a concentration in heat in areas where such absorber has been applied and thereby effecting sealing. (abstract, figures, col. 1, lines 20-50, col. 2, lines 24-57, col. 3, lines 30-71, col. 4, lines 5-50)

Corrsin teaches the use of inks but not the use of dyes.

Kaieda et al. discloses the use of a resin and a phthalocyanine compound, which may be transparent to visible light but absorptive of heat rays. The heat radiation absorbing material selectively absorbs in the near infrared region. The compound, phthalocyanine compound, is contained with a transparent resin. (abstract, col. 3, lines 15-27)

It would have been obvious to one of ordinary skill in the art at the time of the invention to use the heat radiation absorbing material (selectively absorbs in the near infrared region), phthalocyanine compound, contained with a transparent resin, as taught by Kaieda et al. in the Corrsin process because it is merely replacement of functional equivalents.

Claims 1-8, 12-13, 15, 17-21 & 34-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Muellich (USPN 5,893,959) and in view of Corrsin and Kaieda et al.

Muellich discloses the welding of thermoplastic materials using a laser beam. The transmission coefficient is used in the formation of a bond. Workpieces may be opaque, colored with dye or transparent. After welding, the individual workpiece parts are substantially no longer distinguishable by the human eye. The proportions of the workpiece parts are joined in the visible region and dye pigment may be used for joining. Wavelengths of 1.06 um may be used. (abstract, figures, col. 3, lines 5-10, col. 7, lines 40-65, col. 8, lines 34-67).

Muellich does not specifically teach use of the infrared.

Corrsin discloses the sealing of thermoplastic thin materials using infrared radiation and a carbon material in between the materials. (abstract, figures, col. 1, lines 20-50, col. 2, lines 24-57, col. 3, lines 30-71, col. 4, lines 5-50)

It would have been obvious to one of ordinary skill in the art at the time of the invention to use infrared radiation as taught by Corrsin in the Muellich process because it is a known wavelength to impart welding and hence is a functional equivalent.

Corrsin teaches the use of inks but not the use of dyes.

Kaieda et al. discloses the use of a resin and a phthalocyanine compound, which may be transparent to visible light but absorptive of heat rays. The heat radiation absorbing material selectively absorbs in the near infrared region. The compound,

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phthalocyanine compound, is contained with a transparent resin. (abstract, col. 3, lines 15-27)

It would have been obvious to one of ordinary skill in the art at the time of the invention to use the heat radiation absorbing material (selectively absorbs in the near infrared region), phthalocyanine compound, contained with a transparent resin, as taught by Kaieda et al. in the Corrsin process because it is merely replacement of functional equivalents.

Claims 22-25 & 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Corrsin and Kaieda et al., as stated in the above paragraph and further in view of Osborne (USPN 4,069,080).

Corrsin does not specifically teach the use of fabrics/textiles, polyester, fluoropolymer and so forth or the use of a dye.

Osborne discloses bonding superposed sheets of polymeric material. A CO₂ gas laser is used for welding the plastic materials, as the energy in the beam generated by the laser has wavelengths that are readily absorbed in the thermoplastic materials such as copolymers of vinyl chloride and vinylidene chloride and so forth. It would have been obvious to one of ordinary skill in the art at the time of the invention to sheet material, thermoplastics and so forth because this is merely a design substitution.

The types of materials chosen are a choice in design and substitutions of known equivalent structures may be made. In re Kuhle 188 (CCPA 1975) and In re Ruff 118

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USPQ 343 (CCPA 1958). It would have been obvious to one of ordinary skill in the art at the time of the invention to use a fluoropolymer because it is a polymeric substitute.

Claims 22-25 & 27-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Muellich, Corrsin and Kaieda et al., as stated in the above paragraph and further in view of Osborne.

Muellich does not specifically teach the use of fabrics/textiles, thin films, polyester, fluoropolymer or nylon or the use of a dye.

Osborne discloses bonding superposed sheets of polymeric material. A CO₂ gas laser is used for welding the plastic materials, as the energy in the beam generated by the laser has wavelengths that are readily absorbed in the thermoplastic materials such as copolymers of vinyl chloride and vinylidene chloride and so forth. It would have been obvious to one of ordinary skill in the art at the time of the invention to sheet material, nylon and so forth because this is merely a design substitution.

The types of materials chosen are a choice in design and substitutions of known equivalent structures may be made. In re Kuhle 188 (CCPA 1975) and In re Ruff 118 USPQ 343 (CCPA 1958). It would have been obvious to one of ordinary skill in the art at the time of the invention to use a fluoropolymer because it is a polymeric substitute.

Declaration under 37 C.F.R. 1.132

The declaration under 37 CFR 1.132 filed 12/15/06 is insufficient to overcome the rejection of claims 1-8, 12-13, 15, 17-25, 27-29 & 34-35 based upon Corrsin, Kaieda et al., Muellich, and Osborne as set forth in the Office action because:

It include(s) statements, which amount to an affirmation that the claimed subject matter functions, as it was intended to function. This is not relevant to the issue of nonobviousness of the claimed subject matter and provides no objective evidence thereof. See MPEP § 716.

It refer(s) only to the system described in the above referenced application and not to the individual claims of the application. Thus, there is no showing that the objective evidence of nonobviousness is commensurate in scope with the claims. See MPEP § 716.

Applicant argues that the references do not disclose an organic dye. The examiner respectfully notes that "organic dye" is new matter and there is no basis in applicant's specification for this claim limitation.

Applicant argues that prior art reference do not teach a dye which is visually transparent. The examiner respectfully notes that Kaieda et al. discloses a heat radiation absorbing material (selectively absorbs in the near infrared region), phthalocyanine compound, contained with a transparent resin.

Applicant argues that IR is not taught. The examiner respectfully disagrees because the use of IR is disclosed in the prior art. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking

references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Applicant argues using Andrus. The examiner respectfully notes that this reference was never used in the rejection and was not listed by the examiner as a prior art reference.

In view of the foregoing, when all of the evidence is considered, the totality of the rebuttal evidence of nonobviousness fails to outweigh the evidence of obviousness.

Response to Arguments

Applicant's arguments filed 6/22/07 have been fully considered but they are not persuasive.

Applicant argues that Corrsin does not teach a visually transmissive part and the 780-1500 nm range. The examiner respectfully notes that visually transmissive is taught by Kaieda et al. Corrsin teaches use of the IR range which closely approximates 780-1500nm.

Applicant makes several references to the declaration in the arguments. The examiner respectfully submits that the declaration has been separately addressed see above.

Applicant argues that Muellich does not disclose the use of IR. In response to applicant's arguments against the references individually, one cannot show

nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Applicant argues that Andrus disclosed an organic. The examiner respectfully notes that this reference was never used in the rejection and was not listed by the examiner as a prior art reference.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to M. Alexandra Elve whose telephone number is 571-272-1173. The examiner can normally be reached on 7:30-4:00 Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jonathan Johnson can be reached on 571-272-1177. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

August 30, 2007.

/M. Alexandra Elve/
M. Alexandra Elve
Primary Examiner 1725